

IN THE CLAIMS:

1. (previously presented) An isolated nucleic acid molecule comprising a polynucleotide encoding a phospholipase A2 γ polypeptide that supplies at least one of fatty acids for β -oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.
2. (original) An isolated nucleic acid molecule in accordance with Claim 1, wherein said phospholipase A2 γ polypeptide catalyzes cleavage of fatty acids from the sn-2-position of phospholipids.
3. (previously presented) An isolated nucleic acid molecule in accordance with Claim 2 wherein said polynucleotide encodes a sequence as set forth in SEQ ID NO: 6.
4. (original) A vector comprising a nucleic acid molecule in accordance with Claim 1.
5. (original) A cell transformed or transfected with a vector in accordance with Claim 4.
6. (canceled)
7. (previously presented) An isolated nucleic acid comprising a polynucleotide having at least about 90% sequence identity with SEQ ID NO: 6 wherein the encoded polypeptide has an enzymatic activity, and wherein the isolated nucleic acid is configured to supply at least one of fatty acids for β -oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.
8. (currently amended) An isolated nucleic acid ~~according to claim~~ in accordance with 7 comprising SEQ ID NO: 6.
9. (currently amended) [[An]] An isolated nucleic acid molecule in accordance with Claim 1, wherein said molecule comprises an antisense sequence which specifically hybridizes to SEQ ID NO: 6, wherein the antisense sequence is configured to supply at least one of fatty acids for β -oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.

10-15. (canceled)

16. (currently amended) [[A]] An isolated nucleic acid molecule in accordance with Claim 1, wherein said molecule comprises a vector comprising a nucleic acid molecule in accordance with Claim 1 suitable for generating a transgenic mouse wherein said vector comprises a reporter gene which encodes an enzyme capable of being detected by a colorimetric, fluorometric or luminometric assay.

17. (previously presented) A vector in accordance with Claim 16 wherein said reporter gene encodes a luciferase.

18-20. (canceled).

21-36. (canceled)

37. (currently amended) [[A]] An isolated nucleic acid molecule in accordance with Claim 1, wherein said molecule comprises a transgenic construct containing a promoter upstream of a full-length phospholipase A2 (iPLA₂) coding sequence SEQ ID NO: 6 for myocardial specific expression of recombinant iPLA₂ mice to supply at least one of fatty acids for β -oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.

38-39. (canceled)

40. (previously presented) An in vitro expression construct in which an iPLA₂ sequence is cloned downstream from an SV40 promoter, wherein the in vitro expression construct is configured to supply at least one of fatty acids for β -oxidation and hydrolyzing lipids for signaling molecules to regulate energy storage.

41-48. (canceled)